IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A reconfigurable thin-film-based dense wavelength division multiplexing (DWDM) device, comprising:

a dual fiber collimator having an input port for receiving an input optical signal and a reflection output port;

a single fiber collimator having a transmission output port; and

a thin film filter located between the dual fiber collimator and the single fiber collimator, the thin film filter having a first face and a second face, the first face of the thin film filter having an upper one-half and a lower one-half, the upper one-half of the first face of the thin film having a thin film coating that allows a specific wavelength of the input optical signal to pass through and the lower one-half of the first face in the thin film filter being coated with a reflective material that reflects the input optical signal, wherein the reflective coating has a thickness that is an integer multiple of the specific wavelength of the input optical signal, divided by sin(θ), wherein the angle θ is equal to an incident angle between the input optical signal and the thin film filter, and wherein the thin film filter is movable between a pass-through state, a transient state and a blocking state along a single axis, whereby in the transient state a portion of the optical signal projects on the thin film coating and another portion of the optical signal projects on the reflective material..

2. (Previously Presented) The DWDM device of Claim 1, wherein the thin film filter has a first position such that the specific wavelength of the input optical signal travels through the dual fiber collimator, the upper one-half of the first face in the thin film filter, and the single collimator in generating an output optical signal at the transmission output port.

3. (Original) The DWDM device of Claim 2, wherein the thin film filter has a second position such that the input optical signal travels through the dual fiber collimator, projects into the lower one-half of the first face in the thin film filter having the reflective material, thereby the input optical signal is reflected back through the dual fiber collimator to the reflection output

port.

4. (Original) The DWDM device of Claim 2, further comprising a mechanical relay for moving the thin film filter to the first position.

5. (Previously Presented) The DWDM device of Claim 3, further comprising a mechanical relay for moving the thin film filter to the second position.

6. (Original) The DWDM device of Claim 1, wherein the reflective material of the lower one-half in the first face of the thin film filter comprises gold.

7. (Original) The DWDM device of Claim 1, wherein the reflective material of the lower one-half in the first face of the thin film filter is coated with a metal or an oxide.

8. (Currently Amended) A reconfigurable device, comprising:

an input port for receiving a light signal; and

a thin film filter having a first face and a second face, the first face of the thin film filter having an upper surface area and a lower surface area, wherein the upper surface area is thin film coated for passing through a wavelength of the light signal and the lower surface area is coated with a reflective material for blocking and reflecting the light signal, wherein the coating of the reflective material has a thickness t that allows for hitless switching as the thin film filter moves between a pass-through state and a blocking state ~~of the wavelength of the light signal and wherein the thin film filter is movable between a pass-through state, a transient state and a blocking state along a single axis~~, wherein the thickness t is equal to a parameter n times a specific wavelength λ of the light signal, divided by $\sin(\theta)$, wherein the angle θ is equal to an incident angle between the light signal and the thin film filter.

9. (Original) The reconfigurable device of Claim 8, further comprising a dual fiber collimator coupled between the input port and the thin film filter, the dual fiber collimator coupled to the input port for receiving the light signal and having a reflection port for receiving the reflected light signal.

10. (Previously Presented) The reconfigurable device of Claim 9, further comprising a single fiber collimator for receiving the wavelength of light signal from the thin film filter and transmitting the light signal to a transmission output port.

11. (Original) The reconfigurable device of Claim 8, wherein the reflective material of the lower surface area in the first face of the thin film filter comprises gold.

12. (Previously Presented) The reconfigurable device of Claim 8, wherein the reflective material of the lower surface area in the first face of the thin film filter comprises an oxide.

13. (Original) The reconfigurable device of Claim 8, further comprising a mechanical relay for moving the thin film filter to a first position for passing through the wavelength of light signal through the upper surface area in the first face of the thin film filter.

14. (Original) The reconfigurable device of Claim 8, further comprising a mechanical relay for moving the thin film filter to a second position such that the light signal is reflected back from the lower surface area of the first face in the thin film filter.

15. (Currently Amended) A hitless thin film filter; comprising:

a thin film filter having a first face and a second face, the first face having an upper surface and a lower surface; and

a reflective material coated onto the lower surface of the first face in the thin film filter, wherein the reflective material has a thickness t in which the thickness t affects the intensity of a light beam I that is projected from a cross junction of the thin film filter, the cross junction of the thin film filter being located between the upper surface and the lower surface, wherein the thickness t is selected so that the intensity of the light beam I that is projected from the cross junction of the thin film filter is at a maximum and wherein the thin film filter is movable between a pass-through state, a transient state and a blocking state along a single axis such that the light beam projects on the upper surface and on the lower surface when the thin film filter is in the transient state, wherein the thickness t is governed by the following equation: t(sinθ) =

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$n\lambda$, wherein the angle θ denotes the incident angle of light, the symbol λ denotes a particular wavelength and the symbol n denotes an integer or fractional number, wherein if n is an integer then the intensity of the light beam I is at a maximum and if $n = \frac{1}{2}$ then the intensity of the light beam I is at a minimum.

16. – 17. (Cancelled)

18. (Currently Amended) A reconfigurable add-drop optical system, comprising:

a first thin film filter chip having a first face and a second face, wherein the first face of the first thin film filter chip is partially coated with a thin film to transmit a specific wavelength of a light signal and is partially coated with a reflective material to a thickness t that allows the specific wavelength of the light signal to undergo hitless switching as ~~such that~~ a portion of a light beam projects on the thin film and another portion of the light beam projects on the reflective material ~~at substantially the same time~~, wherein the thickness $t = n\lambda/(\sin\theta)$ and wherein n = a parameter number, λ = a specific wavelength, and the angle θ = the angle θ is an incident angle between the light signal and the first face having the thin film; and

a second thin film chip, coupled to the first thin film chip, having a first face and a second face, wherein the first face of the second thin film filter chip is partially coated with a thin film and partially coated with a reflective material.

19. (Previously Presented) The reconfigurable add-drop optical system of Claim 18, further comprising a third thin film chip, coupled to the second thin film chip, having a first face and a second face, wherein the first face of the third thin film filter chip is partially coated with a thin film and partially coated with a reflective material.

20. (Original) The reconfigurable add-drop optical system of Claim 18, further comprising:

a dual fiber collimator coupled to the first thin film chip, the dual fiber collimator having an input port and a reflection output port; and

a single fiber collimator coupled to the first thin film chip, the single fiber collimator having a transmission output port.

21. (Cancelled)

22. (Cancelled)

Please add the following new claims:

23. (New) The DWDM device of Claim 1, the integer multiple is selected for producing a maximum intensity of light at a cross junction between the upper one-half and the lower one-half such that there is constructive interference between the portion of the optical signal that projects on the thin film coating and the portion of the optical signal that projects on the reflective material

24. (New) The reconfigurable device of Claim 8, wherein if n is an integer then an intensity of a light at a cross junction between the upper surface area and the lower surface area is at a maximum level.

25. (New) The reconfigurable add-drop optical system of Claim 18, wherein if n is an integer number then there is a constructive interference between the portion of the light beam the projects on the thin film and the portion of the light beam that projects on the reflective material.